REMARKS

Hydroxyl alkanoate (hereinafter "HA") and poly(hydroxyl alkanoate) (hereinafter "PHA") compounds were elected as species D in the Response to the Restriction Requirement filed September 4, 2007.

However, the Office is of the view that the election of Species D drawn to hydroxyl alkanoate and poly(hydroxyl alkanoate) is not described in the specification as being "an acyl group receptor." More particularly, the Office appears to contend that although an "acyl group receptor" may be used a substrate for the CoA enzyme of an acyl transfer reaction, the hydroxyl alkanoate and poly(hydroxyl alkanoate) elected as Species D does not find support in the specification as being a substrate for a CoA enzyme. Accordingly, the Office requires Applicants to point out support in the specification for such species as being an "acyl group receptor."

In response, HA and PHA are described as an acyl group receptor in the present specification for the following reasons.

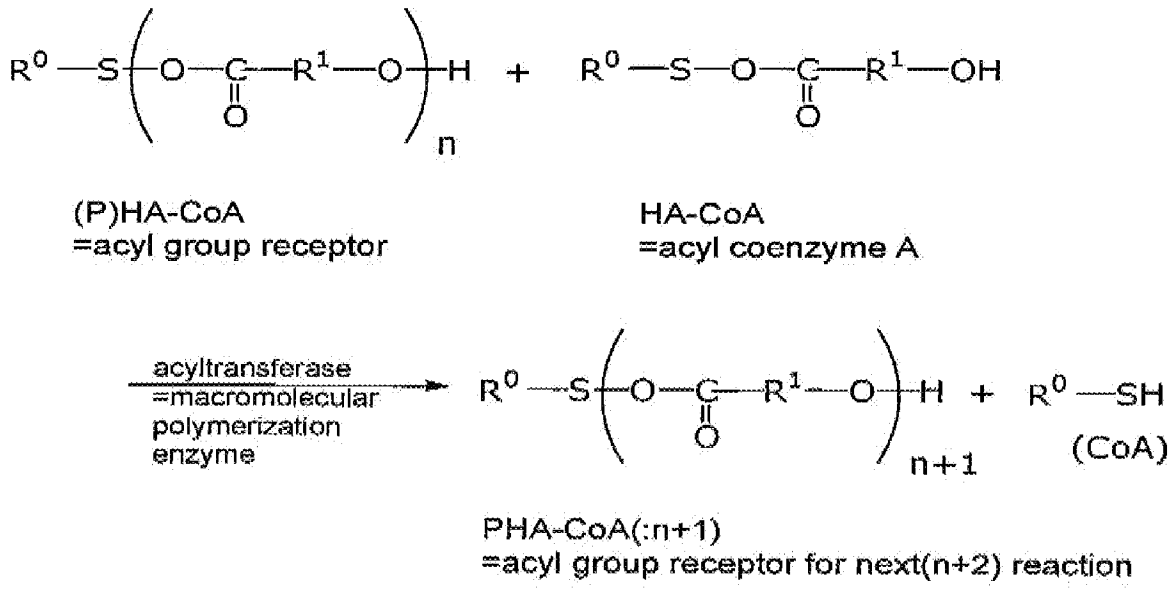
The present invention relates to highly efficient transfer reaction of acyl group, as described in claims 1 and 2 and the specification page 18, lines 12-19. The transfer reaction, as described in the specification at page 18, line 20 to page 19, line 9, comprises an efficient transfer reaction of acyl group as one embodiment, and a polymer-producing reaction as another embodiment. The two reactions are fully described by the specification.

The reaction relevant to the election of Species D is a polymer-producing reaction.

The acyl group receptors (amino acids) the Office cited from the specification are receptors used in the efficient transfer reaction of acyl group as the first embodiment and are not

described in the specification as receptors used in the second embodiment (for a polymer-producing reaction). With respect to the polymer-producing reaction, the specification provides an explanation at paragraph (2) of page 22, line 27 to page 29, line 28, and claim 11.

The polymer-producing reaction (PHA synthesis reaction) can be shown by the chemical formula appearing in the bottom part of page 27 in the specification. By repeatedly conducting the reaction, polymerization proceeds in the following manner:



As shown in the above formula, (P)HA-CoA having the repetition number, n, receives an acyl group from acyl coenzyme A (=HA CoA) to add 1 to n, so that PHA-CoA having the repetition number n+1 can be generated. In this reaction, (P)HA-CoA having the repetition number n is an acyl group receptor.

Further, PHA-CoA having the repetition number increased to be n+1 receives another acyl group from acyl coenzyme A (=HA CoA) in the next reaction to add 1 to n+l so that PHA-

CoA having the repetition number n+2 can be generated. In this occasion, the PHA-CoA having the repetition number increased to be n+1 serves as an acyl group receptor.

Such a reaction is repeated to make the chain longer to thereby produce a polymer.

This mechanism is described in claims 11 and 12. In particular, claim 12 is directed to an acyltransferase reaction that is repeated using acyl coenzyme A or a product by the acyltransferase reaction as an acyl group receptor. Clearly, the acyl group is acyl coenzyme A or a product by the acyltransferase reaction. In this reaction, the "acyl coenzyme A" corresponds to (P)HA-CoA wherein the repetition number n is 1 in the above formula (HA-CoA) and the "product by the acyltransferase reaction" corresponds to (P)HA-CoA wherein the repetition number n is 2 or more in the above formula (PHA-CoA).

Therefore, HA and PHA as an acyl group receptor, i.e., as HA-CoA and PHA-CoA, respectively, is described in the specification, and election of HA and PHA as species D is proper.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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